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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,347	02/06/2004	Takahide Sugiyama	Q79776	5054

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WASHINGTON, DC 20037

EXAMINER

ZEC, FILIP

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,347

Applicant(s)

SUGIYAMA ET AL.

Examiner

Filip Zec

Art Unit

3744

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/7/04</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,380,909 to Sung. In FIG. 1, Sung teaches an absorption chiller-heater comprising an exhaust gas flow path (83) in which an exhaust gas flows; an exhaust gas fired regenerator (32) provided on said exhaust gas flow path so as to be heated by said exhaust gas; a cooling medium solution passage (61) supplying a first solution of a cooling medium which is collected by an absorber (36) to said exhaust gas fired regenerator; and an exhaust gas heat collector (42) provided on said cooling medium solution passage for carrying out heat exchange between said first solution and said exhaust gas.

3. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,651,457 to Hoshino et al. In FIG. 1, Hoshino teaches an absorption chiller-heater comprising an exhaust gas flow path (12) in which an exhaust gas flows; an exhaust gas fired regenerator (7a) provided on said exhaust gas flow path so as to be heated by said exhaust gas; a cooling medium solution passage (from 6 to 10 to 8 to 7) supplying a first solution of a cooling medium

Art Unit: 3744

which is collected by an absorber (6) to said exhaust gas fired regenerator; and an exhaust gas heat collector (7b) provided on said cooling medium solution passage for carrying out heat exchange between said first solution and said exhaust gas; said chiller-heater further comprising a low temperature heat exchanger (8) provided on an upstream side of said cooling medium solution passage with respect to a flow of said first solution therein for carrying out heat exchange between said first solution and a second of said cooling medium (from 3) and a high temperature heat exchanger (9) provided on a downstream side of said diluted solution passage with respect to said flow of said first solution therein for carrying out heat exchange between said first solution and a third solution of said cooling medium (from 2 to 3); wherein said exhaust gas heat collector is provided on said cooling medium solution passage between the low temperature heat exchanger and the high temperature heat exchanger (see FIG. 1, pipe between 8 and 9) and wherein said exhaust gas fired regenerator and said exhaust gas heat collector are integrated into a single unit (7).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,651,457 to Hoshino et al. Hoshino discloses applicant's basic inventive concept, an absorption chiller-heater, substantially as claimed with the exception of stating that a first unit is integrally formed

Art Unit: 3744

with a second regenerator, a condenser, the absorber and an evaporator, and that a second unit, which is integrally formed with the exhaust gas fired regenerator and the exhaust gas heat collector is mounted on said first unit. The applicant is reminded that the use of a one piece construction instead of the structure disclosed in Hoshino would be merely a matter of obvious engineering choice, *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). Also, the applicant should note that the selection of a shape and a location of a prior art device is a design consideration within the skill of the art, *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hoshino, by having a first unit integrally formed with a second regenerator, a condenser, the absorber and an evaporator, and a second unit, which is integrally formed with the exhaust gas fired regenerator and the exhaust gas heat collector, be mounted on said first unit in order to use the gravity to provide the flow of the liquid cooling medium, regenerated in the second unit, to flow into the condenser, a part of the first unit.

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,311,504 to Yamazaki, Shiguma et al. teaches an absorption heat pump and method for controlling the same.

U.S. Patent 6,666,037 to Hoshino, Toshiyuki et al. teaches an absorption refrigerator control method.

Art Unit: 3744

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (571) 272-4815. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec  
Examiner  
Art Unit 3744

  
**CHERYL TYLER**  
SUPERVISORY PATENT EXAMINER

FZ